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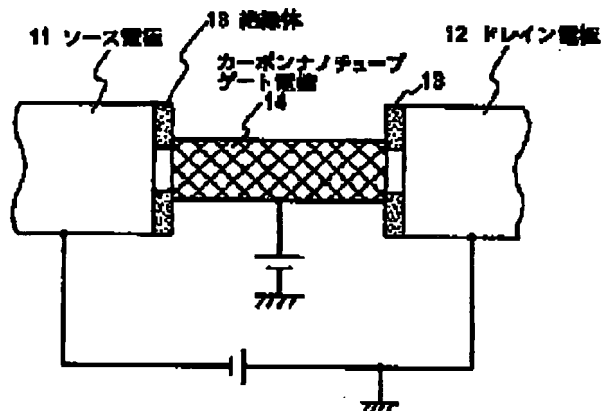
APPLICATION DATE : 25-10-93
APPLICATION NUMBER : 05266644

APPLICANT : NEC CORP;

INVENTOR : NAKAMURA KAZUO;

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TITLE : CARBON NANOTUBE TRANSISTOR



ABSTRACT : PURPOSE: To provide an extremely small-sized transistor which operates at low voltage.

CONSTITUTION: A source electrode 11 and a drain electrode 12 are provided on both ends of a carbon nanotube electrode 14 through insulators 13. The nanotube is cylindrical, and the inner part is generally vacuum. Thus, when a voltage is applied between the source and drain electrodes, electrons are emitted from the source electrode to the drain electrode to form a drain current. When a gate voltage is applied to the nanotube 14, the number of electrons reaching the drain can be controlled, and the nanotube is operated as a transistor.

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